

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 October 2003 (09.10.2003)

PCT

(10) International Publication Number
WO 03/082328 A1

(51) International Patent Classification⁷: A61K 39/00,
39/395, 48/00, C07K 16/00, C12N 15/00, 15/63, 15/87

(74) Agent: NOONAN, William, D.; Klarquist Sparkman,
LLP, One World Trade Center, Suite 1600, 121 SW Salmon
Street, Portland, OR 97204 (US).

(21) International Application Number: PCT/US02/39793

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:
11 December 2002 (11.12.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/363,734 12 March 2002 (12.03.2002) US
60/380,978 15 May 2002 (15.05.2002) US
60/419,179 16 October 2002 (16.10.2002) US

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): THE
GOVERNMENT OF THE UNITED STATES OF
AMERICA as represented by THE SECRETARY OF
THE DEPARTMENT OF HEALTH AND HUMAN
SERVICES [US/US]; National Institutes of Health, Of-
fice of Technology Transfer, Suite 325, 6011 Executive
Boulevard, Rockville, MD 20852-3804 (US).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): YOSHIMURA, Teizo
[JP/US]; 5709 Eitzler Road, Frederick, MD 21702 (US).

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*



WO 03/082328 A1

(54) Title: USE OF DISCOIDIN DOMAIN RECEPTOR 1 (DDR1) AND AGENTS THAT AFFECT THE DDR1/COLLAGEN
PATHWAY

(57) Abstract: The disclosure provides methods of modulating the activity of DDR1. Methods for screening for agents that activate
DDR1 are disclosed. Methods for inducing the maturation of immature macrophages and immature dendritic cells are also disclosed.
In addition, methods for increasing neutrophil activation using a DDR1 activating agent, and methods for increasing leukocyte mi-
gration using a DDR1 activating agent, are provided.